UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/589,440	05/29/2007	Arvind Thiagarajan	630186.402USPC	7256

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BLACK LOWE & GRAHAM, PLLC
701 FIFTH AVENUE
SUITE 4800
SEATTLE, WA 98104

EXAMINER
JACKSON, JENISE E

ART UNIT	PAPER NUMBER
2439	

NOTIFICATION DATE	DELIVERY MODE
09/16/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docketing-patent@blacklaw.com
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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _29 May 2007_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-20_ is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-20_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☒ All   b)☐ Some *   c)☐ None of:

         1.☒ Certified copies of the priority documents have been received.

         2.☐ Certified copies of the priority documents have been received in Application No. _____.

         3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _12/24/2009_.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____ .

DETAILED ACTION

Claim Rejections - 35 USC § 101

1.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2.   Claims 1-13, 15-20 are rejected under 35 U.S.C. 101 based on Supreme Court precedent and recent Federal Circuit decisions, a 35 U.S.C § 101 process must (1) be tied to a particular machine or (2) transform underlying subject matter (such as an article or materials) to a different state or thing. In re Bilski et al, 88 USPQ 2d 1385 CAFC (2008); Diamond v. Diehr, 450 U.S. 175, 184 (1981); Parker v. Flook, 437 U.S. 584, 588 n.9 (1978); Gottschalk v. Benson, 409 U.S. 63, 70 (1972); Cochrane v. Deener, 94 U.S. 780,787-88 (1876).

        An example of a method claim that would <u>not</u> qualify as a statutory process would be a claim that recited purely mental steps. Thus, to qualify as a § 101 statutory process, the claim should positively recite the particular machine to which it is tied, for example by identifying the apparatus that accomplishes the method steps, or positively recite the subject matter that is being transformed, for example by identifying the material that is being changed to a different state.

        Here, applicant's method steps are not tied to a particular machine and do not perform a transformation. Thus, the claims are non-statutory.

        The mere recitation of the machine in the preamble with an absence of a machine in the body of the claim fails to make the claim statutory under 35 USC 101. *Note the Board of Patent Appeals Informative Opinion Ex parte Langemyer et al.*

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

4.   Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bovik et

al(5,282,255) in view of Hayashi(7,356,148).

5.   As per claim 1, Bovik discloses wherein each element is compared with a previous

element and: (a) if they are both equal, a first value is recorded; (b) if they are not both equal, a

second value is recorded(see col. 28, lines 50-52). Bovik does not disclose; however Hayashi

discloses a method for encrypting highly correlated data, and wherein an encryption layer is

added(see col. 1, lines 48-55, 59-60, col. 6, lines 58-64, col. 7, lines 50-65). It would have been

obvious to one of ordinary skill in the art at the time of the invention to include encrypting highly

correlated and adding an encryption layer of Hayashi with Bovik, because both are analogous for

representing data in a bit plane, the motivation is that in order to securely transmit image data the

entire image data is encrypted, thus only a person who has the decryption key can correctly

decrypt the image data(see col. 1, lines 13-18 of Hayashi).

6.   Same Motivation as claim 1. As per claim 2, Bovik discloses wherein comprises a pre-

processing and post-processing step, the pre-processing step estimating the rate of change of the

intensity in the image, and separating the image into areas of high intensity changes and low

intensity changes(see col. 4, lines 58-68, col. 5, lines 1-21). Hayashi discloses adding the

encryption layer, and scrambling values(see col. 1, lines 48-55, 59-60, col. 6, lines 58-64, col. 7,

lines 50-65).

7.   As per claim 3, Bovik discloses wherein the data is image data(see col. 3, lines 23-31).

8.   As per claim 4, Bovik discloses wherein each element is a pixel(see col. 9, lines 33-46).

9.   As per claim 5, Bovik discloses wherein the first value is a 1, and the second value is a 0(see col. 28, lines 50-52).

10.   As per claim 6, Bovik discloses wherein the first and second values are stored in a bit plane(see fig. 15, sheet 10).

11.   As per claim 7, Bovik discloses wherein for a one-dimensional compression, a single bit plane is used to store the values(see fig. 15, wherein for one-dimensional compression would be inherent for a single bit plane to store the values).

12.   As per claim 8, Bovik discloses wherein for a two-dimensional compression, comparison is in both horizontal and vertical directions, a separate bit plane being used for each direction(see fig. 15 sheet 10).

13.   As per claim 9, Bovik discloses wherein the bit-planes for the horizontal and vertical directions are combined by binary addition to form a repetition coded compression bit-plane(see col. 25, lines 13-61).

14.   As per clam 10, Bovik discloses wherein the combining is by binary addition, only the second values being stored for lossless reconstruction of the data(see col. 25, lines 13-61).

15.   As per claim 11, Bovik discloses wherein the result of the combining is repetition coded compression data values, all other data values being able to be reconstructed using the repetition coded compression data values, and the bit planes for the horizontal and vertical directions(see col. 25, lines 13-61).

16.   As per claim 12, Bovik discloses wherein storage in bit planes is in a matrix(see fig. 15

sheet 10).

17.   As per claim 13, Bovik discloses wherein a single mathematical operation is performed

for each element(see col. 28, lines 45-48).

18.   Same Motivation as claim 1 above. As per claim 14, Bovik discloses using repetition

coded compression(see col. 25, lines 13-61), the system comprising: (a) a data receiver for

receiving digital data(see fig. 1, elements 11 and 12 and col. 8, lines 41-54); (b) a reshaping

block for rearranging the digital data into a matrix of data values(see fig. 1, and col. 8, lines 41-

54); (c) a processor for receiving the matrix of data values and compressing the data values to

form compressed data(see fig. 1, element 16 and col. 8, line 66 thorough col. 9, line 6); (d) a

memory for storage of the compressed data; (e) an to mathematically manipulate the compressed

data(see fig. 1 element 21, col. 9, lines 19-20).

19.   Bovik is silent on; however, Hayashi discloses an encryption system for encrypting

highly correlated data, encryption module for adding an encryption layer(see col. 1, lines 48-55,

59-60, col. 6, lines 58-64, col. 7, lines 50-65).

20.   As per claim 15, Bovik discloses (a) receiving digital data; (b) reshaping the digital data

into a digital data matrix(col. 8, lines 41-54); (c) encoding repetitions in the digital data matrix

into a bit-plane index, and stored data values(see fig. 1, element 16, col. 8, line 66 through col. 9,

line 6); and (d) storing the compressed data in a storage memory(see fig. 1, element 21, col. 9,

lines 19-20).

21.   Bovik does not disclose; however, Hayashi discloses a method for encrypting data(see

col. 1, lines 48-55, 59-60, col. 6, lines 58-64, col. 7, lines 50-65).

22.   As per claim 16, Bovik discloses wherein there the bit-planes containing information regarding the repetitions along horizontal and vertical directions(see fig. 15 sheet 10).

23.   As per claim 17, Bovik discloses combining the horizontal and vertical bit-planes by a binary addition operation to give a repetition coded compression bit-plane(see fig. 15).

24.   As per claim 18, Bovik discloses comparing the repetition coded compression bit-plane with the digital data matrix to obtain final repetition coded compression data values(see col. 25, lines 13-61).

25.   As per claim 19, Bovik discloses storing and archiving the repetition coded compression data values along with the horizontal and vertical bit-planes(see col. 25, lines 13-61).

26.   As per claim 20, Bovik discloses wherein the method is used for a communications applications(see col. 18, lines 45-55).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JENISE E. JACKSON whose telephone number is (571)272-3791. The examiner can normally be reached on Increased Flex time, but generally in the office M-Fri(8-4:30)..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edan Orgad can be reached on (571) 272-7884. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

September 3, 2010
/J. E. J./
Examiner, Art Unit 2439

/Yin-Chen Shaw/

Examiner, Art Unit 2439